



## Costa Rica - Canada Initiative

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### THE LINKS BETWEEN FOREST ISSUES AND THE INTERNATIONAL FOREST POLICY DIALOGUE

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**Note:** This paper represents the views of the author and not necessarily those of the partners of the Costa Rica-Canada initiative.

#### BACKGROUND

In September 1998, the Governments of Costa Rica and Canada agreed to co-sponsor an initiative to support the work of the Intergovernmental Forum on Forests (IFF). The initiative aims at providing a neutral forum for the international forest community to consider the relative merits and potential elements of legally binding instruments for all types of forests.

In support of the initiative, Canada funded the preparation of this background document. It is the work of an independent consultant, identifying the links between key international forest issues and the international forest policy dialogue. It represents the views of the author and not necessarily those of the Government of Canada. As appropriate, the paper will be revised to reflect discussions within the context of the Costa Rica and Canada initiative.

The first part of the document summarizes the outcomes of international deliberations, as found in four reference documents: the Forest Principles, forest related chapters of Agenda 21, the final report of the Intergovernmental Panel on Forests (IPF) and the programme of work of the Intergovernmental Forum on Forests (IFF).

Annex A consists of a tabular summary showing the links between 53 forest issues and the descriptions of these issues drawn from the reference documents noted above.

#### OUTCOMES OF INTERNATIONAL DELIBERATIONS

##### A. Institutions and policy instruments

##### A-1 coordination of international action on forests

There are a number of international instruments and institutions that deal with specific aspects of or matters closely related to forests, as well as with matters in other sectors that may directly affect forests. However, at the present time, there is no single multilateral body, organization or instrument that has either a mandate or capacity to address, in a balanced, holistic and mutually reinforcing way, all issues that are on the international agenda with respect to all types of forests.

Fundamental to sustainable development is the need to promote an international economic climate conducive to sustained and environmentally sound development of forests in all countries, which includes the promotion of sustainable patterns of production and consumption, the eradication of poverty and the promotion of food security.

Countries have the sovereign right to exploit their own resources and have the responsibility to ensure that their activities do not cause damage to the environment of other States or of areas beyond their borders. The full cost of achieving benefits of forest conservation and sustainable development should be shared by the international community.

There is a need for enhanced international efforts in a number of interlinked forest-related areas, including: effective governance of international institutions, organizations and instruments dealing with forest issues; improved mechanisms for focusing, coordinating and monitoring the activities of agencies and implementing instruments on international forest-related issues; improved participation of major groups to promote sustainable forest management; projects to strengthen capacity-building, technology transfer and exchange, and human resource development, in particular at the national and field levels; data collection and analysis; improved coordination between international and bilateral funding agencies; and more focused and effective funding for and coordination of research and development in priority areas of sustainable forest management.

Forest-related international, regional and bilateral agencies and organizations, existing legal instruments, financial and trade institutions and treaty bodies should mobilize their respective strengths and capacities in implementing the IPF's proposals for action and should further promote policy dialogue, consensus-building and international cooperation. More needs to be done to clarify mandates, define capacities and address overlaps, gaps and areas that need enhancement. Forest-related activities should be made more transparent, effective and flexible, and should provide for effective participation of and collaboration among all interested parties and major groups. The benefits of regional approaches should be fully explored.

There is a need to facilitate and support the effective implementation of the non-legally binding authoritative statement of principles for a global consensus on the management, conservation and sustainable development of all types of forests.

There are existing international legally binding instruments that are relevant to forests, although they do not deal comprehensively with all issues. These include: Convention on Biological Diversity, Convention to Combat Desertification, Convention on International Trade in Endangered Species of Wild Fauna and Flora, International Tropical Timber Agreement, United Nations Framework Convention on Climate Change, and the Convention on Wetlands of International Importance, Especially as Waterfowl Habitat.

International institutional arrangements, building on existing organizations and mechanisms, should facilitate international cooperation in sustainable forest management.

A continued intergovernmental policy dialogue on forests should promote and facilitate, in a transparent and participatory manner, a holistic consideration of all relevant forest-related issues, and should ensure balanced treatment of all types of forests based on the principles of common but differentiated responsibilities of all countries and the sovereign right of States over their natural resources.

### **A-2 reform of institutions responsible for forest policy**

National policies and strategies should provide a framework for increased efforts, including the development and strengthening of institutions and programmes for the management, conservation and sustainable development of forests and forest lands.

There is a need to clarify the mandates, to define capacities, to address overlaps, gaps and areas that need enhancement of the relevant international institutions and organizations related to forest issues through their respective governing bodies to improve integration and coordination of their efforts and to guide the activities of each organization to areas in which they can be most effective, as well as to work to eliminate waste and duplication.

There is a need to reform fiscal, trade, industrial, transportation and other policies and practices that may lead to forest degradation and replace them with adequate policies, aimed at management, conservation and sustainable development of forests, including, where appropriate, incentives. There is a critical need for countries to take the necessary measures to introduce appropriate policies and create an enabling environment to attract such private sector investment including policies that address long-term land tenure rights and encourage local community investment in sustainable forest management.

There is a need for strengthened intersectoral policy formulation capabilities, decision-making capacities and conflict resolution skills with regards to forest land use.

### **A-3 coordination of cross-sectoral policies and programmes**

To achieve the management, conservation and sustainable development of all types of forests it is necessary to deal coherently with all the interrelated social, cultural, economic, trade, environment, development, production, financial and technology issues that have a concrete impact on those objectives. National policy formulation should take account of the pressures and demands imposed on forests from influencing factors outside the forest sector, and intersectoral means of dealing with them should be sought. The management of forests should be integrated with management of other land uses in adjacent areas so as to maintain economic harmony, ecological balance and sustainable productivity.

There is a need to address, in an integrated manner, such issues as trade, market access and

transparency, economic, environmental and social policies that directly or indirectly affect the forest sector, private investment, financial resources and the transfer of technology. Coordination among all interested parties at the national and international levels is crucial for success.

Environmental impact assessments should be carried out where actions are likely to have significant adverse impacts on important forest resources.

National forest programmes require a broad intersectoral approach at all stages, including the formulation of policies, strategies and plans of action, as well as their implementation, monitoring and evaluation. There is a need to promote coordinated, cross-sectoral action at the political and policy-making level to improve legislation and to accelerate implementation within the context of national sustainable development strategies. Government policies and practices in the forest and other sectors should be integrated to avoid deforestation and forest degradation. Efforts to combat deforestation, forest degradation, desertification, control air-borne pollution and forest assessments, to name a few, require cross-sectoral approaches in the formulation of national forest and land-use programmes.

There is a need to strengthen coordination among international organizations and multilateral institutions to provide a holistic and balanced approach to all types of forests and recipient countries should identify a national authority responsible for in-country coordination in the deployment of financial resources, including ODA, and in requests for external assistance.

#### **A-4 financial mechanisms in support of SFM**

Financial resources should be provided to developing countries to enable them to sustainably manage, conserve and develop their forest resources and to assist them in establishing programmes in forest conservation, sustainable forest management, the protection of natural forest areas, afforestation, reforestation and combating deforestation and forest and land degradation. There is a need to explore innovative ways to both use existing financial mechanisms more effectively and generate new and additional public and private financial resources at the domestic and international levels. Forest-related projects that have global environmental benefits should also be supported through GEF programmes, under the guidance provided by the conferences of parties of the relevant international instruments.

The issue of financial assistance is cross-cutting, interlinked and essential for the management, conservation and sustainable development of all types of forests, requiring the mobilization of new, innovative and additional forms of finance at the public, private, international, domestic and local levels. Financing needs for sustainable forest management at the national level should, as far as possible, be met by the revenue generated by the forest sector itself. However, in developing countries domestic financial resources are scarce and international financial sources (including ODA) remain vital.

It is critical for countries to take the necessary measures to introduce appropriate policies and regulations (e.g. long-term land tenure rights) and to create an enabling environment to attract such private sector investment. Policies and regulations should be carefully evaluated before implementation to avoid negative social and environmental impacts and market distortions,



which would create disincentives. Furthermore, there is a need for strengthening of North-South cooperation and the promotion of South-South as well as trilateral North-South-South cooperation through public and private sector investment and joint ventures.

There is a need to establish an international fund to support activities for the management, conservation and sustainable development of all types of forests, particularly in developing countries.

#### **A-5 forest investment**

Existing resources are insufficient to achieve the management, conservation and sustainable development of all types of forests and greater financial investment is needed from all sources. The provision of external resources, including private foreign investment and official development assistance (ODA), is greatly facilitated by a clear commitment on the part of recipient governments to the implementation of national policies and programmes that promote sustainable forest management in the forest and related sectors. Concurrently, there is a need to improve the absorptive capacity of developing countries to use the financial resources at their disposal more effectively and more efficiently, and more efficient investment policies are needed for the successful implementation of national forest programmes.

In general, private capital flows are growing and are increasingly greater than public funding but are distributed unevenly among developing countries. Investment in forests may be encouraged by voluntary codes of conduct for sustainable forest management, stronger national regulations and enforcement, full cost internalization in the pricing of renewable resources and various incentives.

There is a need for developed countries to formulate and create incentives, such as loan and investment guarantees, to encourage their private sector to invest in sustainable forest management in developing countries, as well as in countries with economies in transition.

#### **A-6 coordination of programmes of donors and recipients**

There is a need to improve the efficiency of and procedures for international cooperation to support the management, conservation and sustainable development of all types of forests in developing countries and countries with economies in transition. Improved coordination among all interested parties at the national and international levels is crucial for sustainable forest management.

In-country coordination and cooperation among donors is crucial in view of the need to make the best use of limited financial resources. National forest programmes provide a good basis in many countries for national and international cooperation, including setting priorities for financial assistance and technology transfer between recipient countries and donors. Donor countries and international organizations are encouraged to support, with financial and technical cooperation, national initiatives to create national forest programmes and policy framework in developing countries.

All interested groups, both governmental and non-governmental, are encouraged to further develop the concept and practice of partnership, which could include partnership agreements, in the implementation of national forest programmes, as one of the potential approaches for improved coordination and cooperation between all national and international partners.

Donor countries can assist recipient countries in promoting an integrated approach towards the formulation and application of national policy frameworks and in conducting strategic analysis of relevant political, legal and institutional policies that have contributed to deforestation and forest degradation, as well as of policies that have had a positive effect.

Coordination of donors and recipients is greatly facilitated by a clear commitment on the part of recipient governments to the implementation of national policies and programmes that promote sustainable forest management.

Donors, international agencies and recipient countries should engage in adequate consultations to develop efficient and coordinated programmes of international cooperation that are consistent with existing international conventions (biological diversity, climate change and desertification), the Forest Principles and Agenda 21.

Donor countries and international organizations need to increase the proportion and availability of their ODA contribution to sustainable forest management. The donor community should work with developing countries to identify their needs for sustainable forest management, to estimate the resources required to finance such needs, and to identify the resources available to them for such purposes, including ODA. Recipient countries should identify a national authority responsible for in-country coordination in the deployment of financial resources.

There needs to be greater emphasis on national and local capacity-building in the development and implementation of international cooperation programmes.

Developed countries bear a special responsibility for facilitating the creation of conditions for the conservation of forest biological diversity and sustainable use of forest biological resources through constructive approaches to the transfer of technologies to strengthen the capabilities of indigenous people, forest dwellers, forest owners and local communities for sustainable forest management.

#### **A-7 technology transfer**

There is an unprecedented accumulation of technological capability in the world today. However, much of it remains unrecognized, underutilized and inadequately shared. The dissemination of those technological innovations is critical. The transfer of environmentally sound technology in the forest sector is an important part of strategies for enabling countries to manage, conserve and sustainably develop their forests. Improved access to and transfer of technologies and corresponding know-how is needed by developing countries to enhance their capacities.

The issue of transfer of technology is cross-cutting, interlinked and essential for the

management, conservation and sustainable development of all types of forests.

Consistent with priorities in national forest programmes, countries should assess and identify their national technological requirements and capabilities to achieve the management, conservation and sustainable development of their forests. Inventories are needed of the most appropriate forest-related technologies as well as the most effective methods of transfer of those technologies. There is considerable potential for strengthening of North-South cooperation and the promotion of South-South as well as trilateral North-South-South cooperation in forest-related technology transfer.

Developed countries should promote, facilitate and finance, as appropriate, access to and the transfer of environmentally sound technologies and corresponding know-how to developing countries on favourable terms, including on concessional and preferential terms.

Some identified priorities for technology transfer include: technology to reduce environmental damages due to current forestry practices; to enhance the conservation and protection of natural forests; native species research, including biotechnology, for tree improvement; rehabilitation and restoration of natural forest ecosystems; reforestation and nursery development; technology and methods for retaining forest values, including biological diversity; incorporation of indigenous knowledge in forest management; utilization, rehabilitation, restoration and regeneration of natural forest ecosystems; new and renewable sources of energy, in particular fuelwood and its appropriate substitutes; environmentally sound forest harvesting technologies; enhancement of technologies regarding wood processing; increase the sustainable utilization of lesser used species; development of new non-wood and wood forest products to promote techniques and design to add more aggregate value for forest products; and reduction of airborne pollution.

There is a need to formulate policies and incentives that encourage all concerned to develop and use environmentally sound technologies and there should be greater emphasis on the development of mechanisms for the dissemination and adaptation of technologies to national and local conditions.

### **A-8 capacity building**

There is a need to strengthen the national, regional and international institutional capabilities in all aspects of the forest sector. Enhanced education, training, science, technology, economics, anthropology and social aspects of forests and forest management are essential to the conservation and sustainable development of forests.

There is a need to build national capacities at all levels to develop, implement, monitor and evaluate sustainable forest management and to improve the absorptive capacities of developing countries to use efficiently the financial resources at their disposal.

Capacity building should involve all interested parties including governments, educational and research institutions, forest owners, local communities, indigenous people and other major groups and should include training, extension services, technology transfer and financial assistance.

Some areas in capacity building that have been identified as requiring special attention include: strengthening forest resource and forest plantations management; improving national and local capacities in forest resources assessment, forest statistics and the capacity to analyze and make proper use of forest resources information; developing intersectoral decision-making capabilities affecting land use; building national and global capacity for forest research; enhancing the assessment capabilities of developing countries in relation to voluntary certification and labelling; developing mechanisms for the dissemination and adaptation of technologies to national and local conditions; ensuring the wider application of traditional forest-related knowledge; and enhancing the capacity of indigenous people and forest-dependent people to participate as equal partners in sustainable forest management agreements.

A greater emphasis is required on national and local capacity-building in the development and implementation of national forest programmes and in international cooperation programmes.

#### **A-9 education and training**

There is a need to strengthen training and education in a range of disciplines important to sustainable forest management, particularly in the social and biological sciences outside the traditional realm of forest management. Countries, donors and international organizations should support education and training programmes to develop resource management approaches that will reduce the pressure on forests in fragile ecosystems affected by degradation, desertification and drought and those forests under pressure to be converted to other land uses.

There is a need to establish, develop and sustain an effective system of forest extension and public education to ensure better awareness, appreciation and management of forests with regard to the multiple roles and values of trees, forests and forest lands including a need for establishing and/or strengthening institutions for forest education and training, as well as forest industries, for developing an adequate cadre of trained and skilled staff at the professional, technical and vocational levels, with emphasis on youth and women.

Governments at the appropriate level, in collaboration with national institutions and interest groups and with the support of regional and international organizations, should launch awareness-raising campaigns to alert and educate people on the importance of sustainable forest management, deforestation, forest degradation, desertification, and integrated land and land resources management and the role that individuals and social groups can play in it.

Broad public awareness as an essential part of a global education effort to strengthen attitudes, values and actions which are compatible with sustainable forest management. It is important to stress the principle of devolving authority, accountability and resources to the most appropriate level with preference given to local responsibility and control over awareness-building activities.

There is a need to establish or strengthen vocational training programmes that meet the needs of environment and development with access to training opportunities, regardless of social status, age, gender, race or religion and to promote a flexible and adaptable workforce of



various ages to meet growing environment and development problems and changes arising from the transition to a sustainable society. Expanded efforts should be made to strengthen national capacities, particularly in scientific education and training, to enable governments, employers and workers to meet their environmental and development objectives and to facilitate the transfer and assimilation of new environmentally sound, socially acceptable and appropriate technology and know-how.

#### **A-10 sharing information**

Access to and exchange of all types of forest-related information is inadequate and there is a need for strengthening and enhancing information sharing capabilities when dealing with all forest issues. The provision of timely, reliable and accurate information on forests and forest ecosystems is essential for public understanding and informed decision-making.

Regional and international cooperation for the exchange of information on the results of forest and forest management research and on technology and know-how development should be enhanced and expanded. Developed countries, international organizations, and international financial institutions are encouraged to assist in the process.

There is a need for enhancing coordination and data sharing among interested parties regarding the implementation of national forest programmes, ODA programming, the provision of new and additional financial resources, increased private sector investment and efficient development and transfer of technology. Assistance is required in the interpretation and dissemination of information relevant to the management, conservation and sustainable development of all types of forests to countries and interested parties who have difficulties in accessing internationally available information, including dissemination through electronic means. Support is needed to facilitate the provision of a better flow to both the policy and operational levels of synthesized information on programme progress, policy development, best management practices and financial strategies for forest sector, for both the public and private sectors, including through the establishment of specialized databases.

#### **A-11 coordination of research**

There is a need to strengthen national and international institutions in their scientific research into the biological, physical, social and economic aspects of sustainable forest management, conservation and development, including the development and application of new technologies. Assessments of the capacity of existing research institutions are required at the regional and subregional levels, identifying the need to establish new centres for research, development and extension, including for biological diversity, forest products and other forest goods and services.

Donors should support, through international, national, regional, intergovernmental and non-governmental bodies, the development of a global capacity for forest research. Research needs

must be prioritized and research consortia or networks should be organized and supported to undertake them.

Research institutions are encouraged to involve all interested parties in the planning, implementation, monitoring and evaluation of their research so as to enhance its relevance and impact. They are encouraged to expand on-site research and support the application of its results.

The institutional needs include the strengthening of existing national research institutions; subregional and regional networks; joint research ventures; approaches to enhancing and strengthening existing international, regional, subregional and national forest research institutions' participation in an international network dedicated to the conservation and sustainable development, management and utilization of forests and forest policy research; and the creation of appropriate mechanisms that could enable research findings to reach policy and field levels more effectively and could support concrete action.

It is importance to develop and identify research priorities at all levels: national, with the involvement of local communities and other interested parties; regional; and international.

The general research priorities that are in need of comprehensive intergovernmental examination include the development of criteria and indicators for sustainable forest management, including their testing at the field level in pilot studies; integrated site-specific socio-economic and biophysical studies to explore the relationship between human development and forests; periodic forest assessment; valuation of forests and forest resources; the use of forest valuation in national resource accounts; community participation, including the adoption of participatory appraisal and other participatory techniques to determine research and technology development agendas; traditional forest-related knowledge; forest conservation including human impact on protected forest areas; consideration of the long-term impacts of pervasive external stresses, such as climate change, ozone depletion and air pollution on forest health, productivity and biodiversity; examination of trends in the supply of and demand for forest products; forest policy at the national, regional and global levels; and environmentally sound technologies for forest-based industries, including cost-effective processing techniques.

#### **A-12 definition of SFM**

Sustainable forest management should be carried out in accordance with national development policies and priorities and on the basis of environmentally sound national guidelines, including the use of relevant internationally agreed methodologies and criteria.

#### **A-13 development of criteria for SFM and A-14 development of indicators for SFM**

There is widespread international interest in and support for the development and implementation of criteria and indicators for sustainable forest management. Countries are

urged to promote the use of agreed upon criteria and indicators as a framework for promoting best forest practices and in facilitating sustainable forest management. There is a need to arrive at a common international understanding on the concepts, essential terms and definitions; on the indicators for forests in similar ecological zones; on a mutual recognition of tools for assessing trends and conditions at the national level; and on transparent and compatible methods for data management. Countries are encouraged to develop and implement criteria and indicators on a cross-sectoral basis and with the full participation of all interested parties.

Criteria and indicators provide a conceptual framework for policy formulation and evaluation, and should be considered as useful tools for assessing trends in forest conditions, for reporting on the state of forests and for achieving sustainable forest management. Countries are encouraged to integrate suitable criteria and indicators into the formulation, implementation, monitoring and evaluation of national forest programmes. Criteria define the essential elements of sustainable forest management while indicators provide a basis for assessing actual forest conditions. They can, therefore, play an important role in defining the goals of national forest programmes and policies, and evaluating the effectiveness with which they are implemented.

There is a need for a broad spectrum of quantitative, qualitative and descriptive indicators covering social, cultural, economic, ecological, institutional, legal and policy elements, including land tenure.

The development of criteria and indicators is primarily intended to promote and monitor sustainable forest management and not to impose certification or labelling schemes for forest products.

At the present time, there is no consensus on the merits of a core set of criteria and indicators for use at the global level. There is a need to involve regions and subregions with distinctive ecological and geographical characteristics and countries with low forest cover, and to consider the development of appropriate criteria and indicators for forests in similar ecological zones. International and national forest assessments should take account of appropriate international, regional, subregional and national-level criteria and indicators for sustainable forest management.

Countries should proceed to prepare, through a participatory approach, national-level criteria and indicators for sustainable forest management. Traditional forest-related knowledge can play an important role in the formulation of criteria and indicators.

Donor countries and multilateral and international organizations are encouraged to provide adequate technical and financial assistance to developing countries and economies in transition to enable them to participate in the further development, field testing and implementation of criteria and indicators at the national, subnational and forest management unit/operational levels.

#### **A-15 national forest programmes**

National forest programmes are comprehensive forest policy frameworks for the achievement of sustainable forest management that demand broad intersectoral approaches at all stages, including the formulation of policies, strategies and plans of action, as well as their implementation, monitoring and evaluation. They can be an important policy tool and can serve as a means of promoting, prioritizing and coordinating both public and private financial investments and be the basis for international cooperation in the forest sector. They should take into account the relationship between the conservation, management and sustainable development of forests and all aspects related to the production and consumption of forest products.

Specific elements that need to be considered during the development and implementation of national forest programmes include: need for appropriate participatory mechanisms and partnerships; decentralization and empowerment of regional and local government structures; recognition and respect for customary and traditional rights; secure land tenure arrangements; effective coordination mechanisms and conflict-resolution schemes; sound economic valuation of forest resources; national sovereignty and country leadership; consistency with national policies and international commitments; integration with the country's sustainable development strategies; and holistic and intersectoral approaches.

National forest programmes can provide an effective link between strategic and operational planning and should be designed to increase effectiveness and efficiency at the country level to attract increased domestic and external resources. There is a need for recipient and donor countries to jointly explore appropriate indicators for monitoring and evaluating the adequacy and effectiveness of forest programmes and projects at the national and local levels, including the integration of suitable criteria and indicators for sustainable forest management.

Countries should establish sound national coordination mechanisms or strategies among all interested parties, based on consensus-building principles, to promote the implementation of national forest programmes. There is a need for greater emphasis on national and local capacity-building in the development and implementation of national forest programmes and for more efficient investment policies.

National forest programmes need to be implemented in the context of each country's socio-economic, cultural, political and environmental situation and should be integrated into wider programmes for sustainable land use, taking into account other sectors, such as agriculture, energy and industrial development.

#### **A-16 forest assessment, inventories, statistics and modelling**

National inventories are an important basis for effective national forest programmes and assessments of the actual and potential conditions of all types of forests is central to sustainable forest management. Unfortunately, existing information on forests is incomplete with much attention still being given to timber and forest cover. More attention has to be given to the other goods and services provided by forests, such as fuelwood, the sustainable use and the sharing of benefits of biological diversity, soil and water protection functions carbon sequestration and sinks as well as other social, cultural and economic considerations.



There is a need to strengthen the capacity of all interested groups undertaking forest inventories and assessments to address the biological, physical, social and economic aspects of sustainable forest management, conservation and development and to adopt integrated and holistic multi-disciplinary approaches that are user-oriented and demand-driven whose results should be transparent and accessible to all interested parties.

Assessments should fully utilize the data already collected and analyzed and disseminate effectively the data already in the public domain, including remote-sensing information. There is a need to harmonize approaches to data collection and analysis to enhance comparability.

There is a need to maintain the current 10-year interval between global forest resources assessments with the possibility of more frequent updates. It should be noted that the assessments impose a significant financial and technical burden on developing countries and should, therefore, be carried out in the most cost-effective manner and be assisted by developed countries and international organizations. Better coordination and avoidance of overlap between forest and other related information systems are required as are clearer priorities for data collection. International and national forest assessments should take account of appropriate international, regional, subregional and national-level criteria and indicators for sustainable forest management.

Countries should improve national forest resources assessments, forest statistics and the capacity to analyze and make proper use of forest resources information and encourage donor countries and international organizations to support those initiatives.

There is a need to formulate an internationally acceptable set of definitions of key terms used in the assessment of all types of forests and their resources and to promote their adoption.

#### **A-17 forest valuation**

Forest valuation should identify the full range of benefits that society derives from forests, including a wide range of social, cultural and environmental benefits and those associated with hydrological functions, soil conservation, biological diversity, global climate regulation and amenity. An inadequate recognition of the value of forests and their contribution of forests to national economies has, in many cases, impeded sustainable forest management and led to deforestation, forest degradation and under investment in forest management. Decisions taken on the management, conservation and sustainable development of forest resources should benefit, to the extent practicable, from a comprehensive assessment of economic and non-economic values of forest goods and services and of the environmental costs and benefits.

The costs associated with deforestation, forest degradation and changes in forest quality, in terms of losses of biological diversity, impaired biological functions and reduced social and environmental values are not adequately measured by current methodologies, due as much to the inability to assess the nature and significance of biophysical, ecological, economic and social impacts resulting from forest change as to uncertainty about how to assess their costs.

There is a difference between value and price, and market mechanisms are not always

appropriate or available to give monetary expression to key forest values, leading to the misconception that sustainable forest management is expensive and not cost-effective.

A variety of methodologies has been developed to aid in the valuation of forest benefits that were previously considered intangible and not amenable to measurement. However, their complexity and the costs may limit their widespread application. While the methodologies have many limitations, they could help improve decision-making by more clearly defining the costs and benefits associated with different patterns of forest use and by indicating the scope for applying various measures to internalize environmental and social costs.

There is a need for international cooperation in the development of and sharing information about innovative and simple scientific valuation methods, especially those related to criteria and indicators and national forest programmes. A comprehensive document should be prepared on the available forest valuation methods and data sets required for the evaluation of forest goods and services, in particular those that are not traded in the marketplace.

There is a need for expanded research into forest valuation methodologies, in particular those related to deforestation and forest degradation, erosion and criteria and indicators.

There is a need to support for national forest-resource accounting as a means of providing strategic information for forest policy and management at the national and subnational levels and of creating awareness of the value of forest goods and services.

#### **A-18 national reporting**

Criteria and indicators can be used by countries and relevant international organizations to improve consistency in reporting on forest assessment and sustainable forest management.

### **B. Environmental issues**

#### **B-1 conservation of biological diversity**

There is a need to recognize the vital role of forests in maintaining the ecological processes and balance at all levels through their role as rich storehouses of biodiversity and biological resources and sources of genetic material for biotechnology products.

Access to biological resources, including genetic material, shall be with due regard to the sovereign rights of the countries where the forests are located and to the sharing on mutually agreed terms of technology and profits from biotechnology products that are derived from these resources.

There is a need to develop national strategies for the conservation of biological diversity and the sustainable use of biological resources and to take appropriate measures for the fair and

equitable sharing of benefits derived from research and development and use of biological and genetic resources, including biotechnology, between the sources of those resources and those who use them. Country studies should be carried out on the conservation of biological diversity and the sustainable use of biological resources, including analyses of relevant costs and benefits, with particular reference to socio-economic aspects.

There is a need to recognize and foster the traditional methods and the knowledge of indigenous people and their communities, emphasizing the particular role of women, relevant to the conservation of biological diversity and the sustainable use of biological resources and ensure the opportunity for the participation of those groups in the economic and commercial benefits derived from the use of such traditional methods and knowledge.

There is a need to implement mechanisms for the improvement, generation, development and sustainable use of biotechnology and its safe transfer, particularly to developing countries, taking account of the potential contribution of biotechnology to the conservation of biological diversity and the sustainable use of biological resources. Broader international and regional cooperation in furthering scientific and economic understanding of the importance of biodiversity and its functions in ecosystems should be promoted.

There is a need to take effective economic, social and other appropriate incentive measures to encourage the conservation of biological diversity and the sustainable use of biological resources, including the promotion of sustainable production systems, such as traditional methods of agriculture, agroforestry, forestry, range and wildlife management which use, maintain or increase biodiversity.

Long-term research should be undertaken into the importance of biodiversity for the functioning of ecosystems and the role of ecosystems in producing goods, environmental services and other values supporting sustainable development.

Action should be taken for the conservation of biological diversity through the in situ conservation of ecosystems and natural habitats, as well as primitive cultivars and their wild relatives, and the maintenance and recovery of viable populations of species in their natural surroundings, and implement ex situ measures, preferably in the source country. In situ measures should include the reinforcement of terrestrial, marine and aquatic protected area systems.

The rehabilitation and restoration of damaged ecosystems and the recovery of threatened and endangered species should be promoted, as should the establishment and strengthening of national inventory, regulation or management and control systems related to biological resources, at the appropriate level.

There is a need to introduce appropriate environmental impact assessment procedures for proposed projects likely to have significant impacts upon biological diversity, providing for suitable information to be made widely available and for public participation, where appropriate, and encourage the assessment of the impacts of relevant policies and programmes on biological diversity.

There is a need to take measures to encourage a greater understanding and appreciation of the value of biological diversity, as manifested both in its component parts and in the ecosystem

## **B-2 establishment of forest protected areas**

There is a need to establish, expand and manage protected area systems, which includes systems of conservation units for their environmental, social and spiritual functions and values, including conservation of forests in representative ecological systems and landscapes, primary old-growth forests, conservation and management of wildlife, nomination of World Heritage Sites under the World Heritage Convention, as appropriate, and the traditional forest habitats of indigenous people, forest dwellers and local communities.

There is a need to maintain forest cover and forest productivity in ecologically, economically and socially sound ways and to include the protection of ecologically viable representative examples of forests, including primary/old-growth forests and forests of cultural, spiritual, historical, religious, and national importance, in the national policies and legislation aimed at management, conservation and sustainable development of forests.

## **B-3 deforestation**

Forests world wide have been and are being threatened by uncontrolled degradation and conversion to other types of land uses, influenced by increasing human needs; agricultural expansion; and environmentally harmful mismanagement, including, for example, lack of adequate forest fire control and anti-poaching measures, unsustainable commercial logging, overgrazing and unregulated browsing, harmful effects of airborne pollutants, economic incentives and other measures taken by other sectors of the economy. The impacts of loss and degradation of forests are in the form of soil erosion; loss of biological diversity, damage to wildlife habitats and degradation of watershed areas, deterioration of the quality of life and reduction of the options for development.

Countries have the sovereign and inalienable right to utilize, manage and develop their forests in accordance with their development needs and level of socio-economic development and on the basis of national policies consistent with sustainable development and legislation, including the conversion of such areas for other uses within the overall socio-economic development plan and based on rational land-use policies.

Donors are encouraged to assist developing countries and countries with economies in transition in undertaking case studies on causes of deforestation and forest degradation using the diagnostic framework methodology; in the application of traditional forest-related knowledge to sustainable forest management; in supporting local and national efforts towards forest land rehabilitation; in promoting the sustainable management and regeneration of natural vegetation in ecosystems affected by desertification and drought.

## **B-4 afforestation and reforestation**



Governments and interested groups should act to maintain and expand the existing vegetative cover wherever ecologically, socially and economically feasible through technical cooperation and other forms of support by carrying out revegetation in appropriate mountain areas, highlands, bare lands, degraded farm lands, arid and semi-arid lands and coastal areas for combating desertification and preventing erosion problems and for other protective functions and national programmes for rehabilitation of degraded lands, including community forestry, social forestry, agroforestry and silvipasture while also taking into account the role of forests as national carbon reservoirs and sinks.

There is a need to maintain and increase forest cover and forest productivity in ecologically, economically and socially sound ways through the rehabilitation, reforestation and re-establishment of trees and forests on unproductive, degraded and deforested lands by involving indigenous people, local communities, forest dwellers and forest owners in their protection and management.

There is a need to recognize, enhance and promote the role of planted forests as sustainable and environmentally sound sources of renewable energy and industrial raw material and to recognize their contribution to the maintenance of ecological processes and to their potential to offset pressure on primary/old-growth forest and provide regional employment and development with the adequate involvement of local inhabitants.

There is a need to undertake greater efforts towards the greening of the world and all countries, notably developed countries, should take positive and transparent action towards reforestation and afforestation.

In drought prone regions, there is a need to carry out accelerated afforestation and reforestation programmes, using drought-resistant, fast-growing species, in particular native ones, including legumes and other species, combined with community-based agroforestry schemes. In this regard, creation of large-scale reforestation and afforestation schemes, particularly through the establishment of green belts, should be considered, bearing in mind the multiple benefits of such measures.

#### **B-5 rehabilitation of fragile ecosystems**

For areas not yet affected or only slightly affected by desertification, there is a need to ensure appropriate management of existing natural forests for the conservation of biodiversity, watershed protection, sustainability of their production and agricultural development and other purposes, with the full participation of indigenous people. There is a need to rehabilitate moderately to severely desertified drylands for productive utilization and sustain their productivity for agropastoral / agroforestry development through soil and water conservation.

There is a need to increase the vegetation cover and support management of biotic resources in regions affected or prone to desertification and drought, notably through such activities as afforestation/reforestation, agroforestry, community forestry and vegetation retention schemes. Interventions should be undertaken in ecologically, economically and socially sound ways through the rehabilitation, reforestation and re-establishment of trees and forests on

unproductive, degraded and deforested lands.

There is a need to recognize the vital role of forests in maintaining the ecological processes and balance at the local, national, regional and global levels through their role in protecting fragile ecosystems.

#### **B-6 carbon storage and sequestration**

Different countries have different requirements, which alter over time and affect both the area and the nature of their forests. Both sustainably managed natural forests and forest plantations, as components of integrated land-use that takes account of environmental and socio-economic concerns, fulfil a valuable role in providing a reservoir for carbon.

There is a need for cooperation to promote sustainable management and conservation and enhancement, as appropriate, of sinks and reservoirs of greenhouse gases, including biomass and forests, as well as other terrestrial, coastal and marine ecosystems.

#### **B-7 mitigating the effects of climate change**

Greater understanding is required of processes that influence and are influenced by the Earth's atmosphere on a global, regional and local scale, including physical, chemical, geological, biological, oceanic, hydrological, economic and social processes.

There is a need to promote research related to the natural processes affecting and being affected by the atmosphere, as well as the critical linkages between sustainable development and atmospheric changes, including impacts on human health, ecosystems, economic sectors and society. Cooperation is needed in research to develop methodologies and identify threshold levels of atmospheric pollutants as well as atmospheric levels of greenhouse gas concentrations that would cause dangerous anthropogenic interference with the climate system and the environment as a whole, and the associated rates of change that would not allow ecosystems to adapt naturally.

There is a need to promote and cooperate in building scientific capacities, exchanging scientific data and information and facilitating the participation and training of experts and technical staff, particularly of developing countries, in research, data assembly, collection and assessment, and systematic observation related to the atmosphere.

Greater understanding is needed of the economic and social consequences of atmospheric changes and of mitigation and response measures addressing such changes.

**B-8 soil and water conservation**

The vital role of forests in maintaining the ecological processes and balance at the local, national, regional and global levels through their role in protecting watersheds, freshwater resources, and soil resources needs to be recognized.

There is a need to carrying out revegetation in appropriate mountain areas, highlands, bare lands, degraded farm lands, arid and semi-arid lands and coastal areas for combating desertification and preventing erosion problems. There is a need to implement urgent direct preventive measures in drylands that are vulnerable but not yet affected, or only slightly desertified drylands, by introducing improved management of soil and water resources.

Improved systems of land/water/crop-management should be promoted, making it possible to combat salinization in existing irrigated croplands, to stabilize rainfed croplands and introduce improved soil/crop-management systems into land-use practice. In many areas, plantations of fast-growing trees have had good and cost-effective results in terms of soil protection.

There is a need to develop appropriate land-use planning and management for both arable and non-arable land in mountain-fed watershed areas to prevent soil erosion, increase biomass production and maintain the ecological balance.

**B-9 impact of non-forest industries**

There is a need to estimate the impacts of activities affecting forestry developments and conservation proposals, in terms of key variables such as developmental goals, benefits and costs, contributions of forests to other sectors, community welfare, environmental conditions and biological diversity and their impacts at the local, regional and global levels.

It is advisable that environmental impact assessments be carried out where actions of non-forest industries are likely to have significant adverse impacts on important forest resources.

Forests need greater protection from pollutants and the uncontrolled introduction of exotic plant and animal species.

Countries and relevant international organizations concerned with forestry and trade should explore ways and means to establish full cost internalization of both wood products and non-wood substitutes.

**B-10 impact of pollution**

States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own

environmental policies and have the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.

There is a need to control the harmful effects of pollution, particularly air-borne pollutants, including those responsible for acidic deposition, that are harmful to the health of forest ecosystems at the local, national, regional and global levels, thereby permitting them to maintain their full multiple value. Airborne pollution affects forest health in many parts of the world and preventative approaches are needed. The potential impact on forest health from inputs of nutrients and airborne pollutants, acting in combination with other processes such as natural weathering and leaching, should be taken into account in forest planning and management.

There is a need to continue monitoring and evaluating the impact of airborne pollution on forest health wherever it has been demonstrated in the world and for information on how the countries concerned have addressed such problem.

Governments, non-governmental organizations, the private sector and the international development agencies should promote cost-effective policies or programmes to minimize industrial pollution and adverse impacts on the atmosphere, and support the promotion of less polluting and more efficient technologies and processes in industries. There is a need for countries to adopt a preventative approach to the reduction of damaging air pollution which may include long-range transboundary air pollution, in national strategies for sustainable development and enter into international agreements, as appropriate, on the reduction of long-range transboundary air pollution.

There is a need for new information on the impact of transboundary pollution. As a consequence, there is a need to facilitate training opportunities and exchange of data, information and national and/or regional experiences on the impact of pollution including the intensified exchange of information on chemical safety, use and emissions among all involved parties. Governments and relevant international organizations with the cooperation of industry should strengthen national institutions responsible for information exchange and promote the creation of national centres where these centres do not exist.

Governments, business and industry, including transnational corporations, should aim to increase the efficiency of resource utilization, including increasing the reuse and recycling of residues and to reduce the quantity of waste discharge per unit of economic output. They should also increase research and development of environmentally sound technologies and environmental management systems and ensure responsible and ethical management of products and processes from the point of view of health, safety and environmental aspects. Business and industry should increase self-regulation, guided by appropriate codes, charters and initiatives integrated into business planning and decision-making and foster openness and dialogue with employees and the public.

### **C. Forest management issues**

#### **C-1 forest protection against fire**



Forest fires continue to have a devastating impact on some forest ecosystems, in particular in countries south of the Sahara and in countries with dry forests in Mediterranean zones, although in other areas they may have positive effects on the vitality and renewal of forest ecosystems.

There is a need to take appropriate measures to protect forests against harmful effects of forest fires to maintain their full multiple value. Governments, with the participation of the private sector, non-governmental organizations, local community groups, indigenous people, women, local government units and the public at large, should act to maintain and expand the existing vegetative cover wherever ecologically, socially and economically feasible, through increasing the protection of forests from fires.

### **C-2 forest protection against insects and diseases**

There is a need to take appropriate measures to protect forests against harmful effects of pests and diseases to maintain their full multiple value.

Governments, with the participation of the private sector, non-governmental organizations, local community groups, indigenous people, women, local government units and the public at large, should act to maintain and expand the existing vegetative cover wherever ecologically, socially and economically feasible, through increasing the protection of forests from insects and disease.

### **C-3 non-timber products and services**

Forest resources and forest lands should be sustainably managed to meet the social, economic, ecological, cultural and spiritual needs of present and future generations, including the needs for forest products and services, such as wood and wood products, water, food, fodder, medicine, fuel, shelter, employment, recreation, habitats for wildlife, landscape diversity, carbon sinks and reservoirs, and for other forest products.

Non-timber products and services must acquire a higher economic profile. The true economic contribution of their various services, like eco-tourism and recreation, should be factored into forest management and planning. There is a need for national institutions to undertake research and development of sustainably harvested non-wood products and the services forests provide.

There is a need to promote/popularize non-timber forest products and other forms of forest resources, apart from fuelwood (e.g., medicinal plants, dyes, fibres, gums, resins, fodder, cultural products, rattan, bamboo) through programmes and social forestry/participatory forest activities, including research on their processing and uses.

There is a need to promote and support the potential of wildlife management, eco-tourism and

the cultivation of wild species as sources of improved rural income and employment. Environmentally sound leisure and tourism activities hold considerable potential, in accordance with The Hague Declaration of Tourism (1989) and the current programmes of the World Tourism Organization and UNEP, to make suitable use of museums, heritage sites, zoos, botanical gardens, national parks and other protected areas.

The issues of trade and environment relating to forest products and services should be addressed in a holistic manner. However, there is inadequate information on both domestic and international trade in non-wood products and forest services and further studies and data gathering are needed to overcome those gaps in future. Policies and regulations are needed that are aimed at creating a favourable environment to attract investment by the domestic and foreign private sectors, as well as local community investment, for non-wood forest product industries. Market distortions, subsidies and relative prices, including those of agricultural commodities, as well as undervaluation of wood and non-wood forest products, can have a direct bearing on the management, conservation and sustainable development of all types of forests.

#### **C-4 traditional forest-related knowledge**

Traditional forest-related knowledge can provide a strong basis for sustainable forest management and its potential to support actions should be reflected in national forest programmes. It constitutes an important body of knowledge and experience relevant to sustainable forest management. It is recognized that the international and national communities are in an early stage of identifying ways and means for the effective protection and use of traditional forest-related knowledge and of exploring the relationships between traditional forest-related knowledge and sustainable forest management. It is a complex cross-cutting relationship that involves natural and social sciences, culture, tradition and the environment.

Some communities with sustainable lifestyles based on traditional forest-related knowledge have been undermined by the accelerated loss of forests resulting from the introduction of new technological changes and economic pressures, in the absence of adequate measures for conservation and sustainable management. Consequently, there is a need to facilitate the maintenance and promotion of environmentally sound indigenous technologies that may have been neglected or displaced.

There is a need to acknowledge indigenous capacity and local knowledge regarding the conservation and sustainable development of forests through enhanced institutional and financial support and in collaboration with the people in the local communities concerned. This requires the equitable sharing of the benefits arising from the utilization of indigenous knowledge.

#### **C-5 fuelwood supply**

Fuelwood is and will continue to be, for some time in the future, the most important use of wood in developing countries and it should be recognized that all types of forests play an

important role in meeting energy requirements through the provision of a renewable source of bio-energy.

Sustainable forest management, afforestation and reforestation have the potential to satisfy the demands for fuelwood for household and industrial needs. Plantations of both indigenous and exotic species offer considerable potential for supplying the demand for fuelwood.

There is a need to promote the research, development, transfer and use of technologies and practices for environmentally sound energy systems, including new and renewable energy systems, with particular attention to developing countries.

There is a need to review current energy supply mixes to determine how the contribution of environmentally sound energy systems, particularly new and renewable energy systems, could be increased in an economically efficient manner, taking into account respective countries' unique social, physical, economic and political characteristics, and examining and implementing, where appropriate, measures to overcome any barriers to their development and use.

There is a need to improve management of forest resources, including fuelwood, and to reduce fuelwood consumption through more efficient utilization, conservation, development and use of other sources of energy, including alternative sources of energy. Similarly, the more efficient and sustainable use of forests and trees for fuelwood and energy needs to be extensively promoted.

#### **C-6 plantations and exotic species**

Developed countries with low forest cover are urged to take positive and transparent action towards reforestation, afforestation and forest conservation while urging other developed countries to assist developing countries and countries with economies in transition to expand their forest cover through the provision of financial resources and transfer of appropriate technology. Countries should develop/strengthen a national and/or master plan for planted forests as a priority, taking into account the economic aspect for future planted forest development, giving emphasis to native species.

There is a need to plan and manage forest plantations, where appropriate, to enhance production and provision of goods and services, paying due attention to relevant social, cultural, economic and environmental considerations in the selection of species, areas and silviculture systems, preferring native species, where appropriate, and taking all practicable steps to avoid replacing natural ecosystems of high ecological and cultural values with forest plantations, particularly monocultures.

Both sustainably managed natural forests and forest plantations fulfil a valuable roles in meeting the need for forest products, goods and services, as well as helping to conserve biological diversity and providing a reservoir for carbon. The costs, benefits and disbenefits of different types of forest management, including forest plantations, need to be appraised under different social, cultural, economic and ecological conditions. The role of forest plantations as an important element of sustainable forest management and as a complement to natural forests

should be recognized.

Plantations of both indigenous and exotic species offer considerable potential for supplying the demand for both fuel and industrial wood.

There is a need to develop industrial and non-industrial planted forests to support and promote national ecologically sound afforestation and reforestation and regeneration programmes in suitable sites, including upgrading of existing planted forests of both industrial and non-industrial and commercial purpose to increase their contribution to human needs and to offset pressure on primary/old growth forests. Attention must be given to improving intermediate yields and improving the rate of returns on investments in planted forests, through interplanting and underplanting valuable crops.

### **C-7 harvesting methodology**

There is a need to ensure the sustainable management of all forest ecosystems and woodlands, through improved proper planning, management and timely implementation of silvicultural operations, including inventory and relevant research, as well as rehabilitation of degraded natural forests to restore productivity and environmental contributions.

Environmentally and ecologically sound and economically viable methods and practices of forest harvesting should be employed and improved upon, including planning and management, use of equipment, storage and transportation to reduce and, if possible, maximize the use of waste and improve the value of both wood and non-wood forest products.

There is a need to review priorities in technology transfer and capacity-building in the use of environmentally sound forest harvesting technologies.

## **D. Economic issues**

### **D-1 forest and forest products industry**

There is a need to develop, expand and/or improve the effectiveness and efficiency of forest-based processing industries, both wood and non-wood based, involving such aspects as efficient conversion technology and improved sustainable utilization of harvesting and process residues; promoting underutilized species in natural forests through research, demonstration and commercialization; promoting value-added secondary processing for improved employment, income and retained value; and promoting/improving markets for, and trade in, forest products through relevant institutions, policies and facilities. Support is needed to gather more information and conduct more independent market and economic studies of potential competition between wood and non-wood substitutes, analyzing the costs and benefits, including any substitution effects, and the impact on the management, conservation and sustainable development of all types of forests.

There is need to support efforts by developing countries, consistent with policies and



programmes for sustainable forest management, to increase their productivity and efficiency in downstream processing activities and to support, where appropriate, community-based processing and marketing of wood and non-timber forest products. With respect to the use of lesser known forest species, there is the need to intensify efforts to promote them in domestic and international markets, to implement policies that encourage their expanded use, and to transfer and adapt technologies for increasing their sustainable utilization.

Countries should assess the long-term trends in their supply and demand for wood and consider actions to promote the sustainability of their wood supply and their means for meeting demand, with special emphasis on investment in sustainable forest management and the strengthening of institutions for forest resource and forest plantations management.

There is a need for developing countries to promote policies and regulations aimed at creating a favourable environment to attract the domestic and foreign private sectors for sustainable forest management, environmentally sound forest-based industries. The following policies should be adopted by developing countries with respect to commodities consistent with market efficiency: expand processing, distribution and improve marketing practices and the competitiveness; diversify to reduce dependence on exports; reflect efficient and sustainable use of factors of production in the formation of prices, including the reflection of environmental, social and resources costs.

In accordance with national socio-economic development and environment priorities, evaluate and promote cost-effective policies or programmes, including administrative, social and economic measures, to encourage environmentally sound land-use practices and implement policies and programmes that will discourage inappropriate and polluting land-use practices.

There is a need to promote efficient, rational and sustainable utilization of all types of forests and vegetation, inclusive of other related lands and forest-based resources, through the development of efficient forest-based processing industries, value-added secondary processing and trade in forest products, based on sustainably managed forest resources and in accordance with plans that integrate all wood and non-wood values of forests. Governments, business and industry, including transnational corporations, should aim to increase the efficiency of resource utilization, including increasing the reuse and recycling of residues, and reduce the quantity of waste discharge per unit of economic output.

There is a need to encourage the concept of stewardship in the management and utilization of natural resources by entrepreneurs and to increase the number of entrepreneurs engaged in enterprises that subscribe to and implement sustainable development policies.

## **D-2 international trade**

There should be an open and free trade in forest products based on non-discriminatory and multilaterally agreed rules and procedures, consistent with international trade law and practices. The international community should halt and reverse protectionism to bring about further liberalization and expansion of world trade to the benefit of all countries, in particular developing countries; provide for an equitable, secure, non-discriminatory and predictable international trading system; facilitate, in a timely way, the integration of all countries into the

world economy and the international trading system; ensure that environment and trade policies are mutually supportive, with a view to achieving sustainable development; and strengthen the international trade policies system through an early, balanced, comprehensive and successful outcome of the Uruguay Round of multilateral trade negotiations.

The issues of trade and environment relating to forest products and services should be addressed in a holistic manner, recognizing, however, that there is inadequate information on both domestic and international trade in non-wood products and forest services. Further studies and data gathering are needed to overcome those gaps and countries and international organizations should study the range of environmental, social and economic impacts of trade-related measures affecting forest products and services. There is a need for international organizations and national institutions to expand their work on market transparency for trade in forest products and services, and to include the possible development of a global database. Furthermore, there is a need to assess and share information on the nature and extent of illegal trade in forest products and to consider measures to counter such illegal trade.

A continuing process of consensus-building is needed, including the exploration of the possible need for specific international trade agreements in forest products and voluntary codes of conduct for sustainable forest management to facilitate and improve trade in forest products in specific areas. Countries should continue to explore the possibility of an international agreement on trade in forest products and examine the possibilities of further initiatives on trade liberalization within the auspices of the World Trade Organization. Efforts should be strengthened with respect to harmonizing sustainable development of forests with national development needs and trade policies that are compatible with the ecologically sound use of forest resources, using, for example, the ITTO Guidelines for Sustainable Management of Tropical Forests.

Among the various international underlying causes of deforestation and forest degradation, discriminatory international trade practices and trade distorting practices could indirectly influence

deforestation and forest degradation.

Market distortions, subsidies and relative prices, including those of agricultural commodities, as

well as undervaluation of wood and non-wood forest products, can have a direct bearing on the management, conservation and sustainable development of all types of forests.

It is recognized that there is the potential for a positive relationship between trade in forest products and services and sustainable forest management. Also recognized is the importance of promoting sustainable forest management through mutually supportive trade and environmental policies, in particular avoiding policies that have adverse impacts on the management, conservation and sustainable development of forests.

For developing countries to benefit from the liberalization of trading systems, they should create a domestic environment supportive of an optimal balance between production for the

domestic and export markets, remove biases against exports, discourage inefficient import-substitution and promote the policy framework and the infrastructure required to improve the efficiency of export and import trade as well as the functioning of domestic markets.

There is a need to promote an international economic climate conducive to sustained and environmentally sound development of forests in all countries, which includes, inter alia, the promotion of sustainable patterns of production and consumption.

### **D-3 market access**

There is a need for all countries to avoid/remove unilateral measures incompatible with international obligations or agreements and to restrict and/or ban international trade in timber and other forest products to attain long-term sustainable forest management. Countries are also encouraged to reduce or remove impediments to the provision of better market access and better prices for higher value-added forest products and their local processing should be encouraged to enable producer countries to better conserve and manage their renewable forest resources.

There is a need to undertake measures for improving market access for forest goods and services, including the reduction of tariff and non-tariff barriers to trade, in accordance with international obligations and commitments, and, in that context, to promote a mutually supportive relationship between environment and trade in forest goods and services and avoid conflict between measures that affect trade in forest goods and services and international obligations so that environmental concerns do not lead to disguised barriers to trade.

There is a need to encourage efforts by the private sector to formulate and implement voluntary codes of conduct for promoting sustainable forest management so as to improve trade in forest products and to endeavour to ensure that external trade policies take into account community rights, where appropriate.

The possibilities of promoting the management, conservation and sustainable development of all types of forests and trade in forest products in the context of an international, comprehensive and legally binding instrument on all types of forests should be explored.

### **D-4 certification**

International attention to the issues of the certification of forest management and labelling of forest products should be put into perspective. To date, only a small proportion of the global trade in forest products and a small area of the world's forests are influenced by those schemes. It is still too early to assess objectively their full potential in promoting sustainable forest management because of inadequate information and relatively few real world experiences.

It is recognized that voluntary certification and labelling schemes are among many potentially useful tools that can be employed to promote the sustainable management of forests. In view of the potential proliferation of schemes, there is a need to promote comparability and avoid

duplication among various voluntary certification and labelling schemes.

Governments have a critical role in promoting effective sustainable forest management systems. However, because certification has thus far been developed as a voluntary private initiative, different views expressed on the roles of governments and intergovernmental institutions in the development or regulation of certification systems require further clarification. Distinctions should be made between the roles of governments as regulators, as promoters of public policy, and in some countries as forest owners.

Similar to their roles in other sustainable forest management initiatives, governments have a role in encouraging transparency, the full participation of interested parties, non-discrimination and open access to voluntary certification schemes.

International efforts should focus on ensuring that existing and new certification and labelling schemes are open and non-discriminatory with respect to the types of forests, the types of forest products, or the types of forest ownership/management. They should not be used as a form of disguised protectionism nor should they conflict with international obligations. The private sector, in consultation with interested parties, should be encouraged to formulate and implement voluntary codes of conduct for promoting sustainable forest management for forest owners, forest developers and international investors in forestry to improve trade in forest products, and should endeavour to ensure that external trade policies take into account community rights, where appropriate.

Countries and international organizations should consider the potentially mutually supportive relationship between sustainable forest management, trade and voluntary certification and labelling schemes operating in accordance with relevant national legislations.

There is a need for developed countries and international organizations to support, through technical and financial assistance, the efforts in developing countries to enhance the assessment capabilities of developing countries in relation to voluntary certification and labelling.

There is a need for further research and study on various aspects of voluntary certification and labelling schemes, including: its effectiveness in promoting sustainable forest management; relationships between various criteria and indicator frameworks and certification; issues relevant to certification and labelling schemes and the role of government; the special needs of local communities, other forest-dependent populations and owners of small forests; the need to monitor practical experience with certification; the development of consistent terminology; and the impacts of such schemes on the relative competitiveness of forest goods and services.

Countries and relevant international organizations dealing with trade in forest products are urged to bring the current trends on certification into perspective and to promote comparability and avoid duplication of efforts among various voluntary certification and labelling schemes.

Countries and relevant agencies should make arrangements for and support an exchange of information and experience on certification and labelling schemes, in appropriate forums, to ensure transparency on an ongoing basis.



### **D-5 supply / demand**

National policies and programmes should take into account the relationship, where it exists, between the conservation, management and sustainable development of forests and all aspects related to the production, consumption, recycling and/or final disposal of forest products. Efforts should be made to promote a supportive international economic climate conducive to sustained and environmentally sound development of forests in all countries, which include, inter alia, the promotion of sustainable patterns of production and consumption, the eradication of poverty and the promotion of food security.

In the years ahead, governments should strive to meet the following broad objectives: to promote efficiency in production processes and reduce wasteful consumption in the process of economic growth, taking into account the development needs of developing countries; to develop a domestic policy framework that will encourage a shift to more sustainable patterns of production and consumption; and to reinforce values that encourage sustainable production and consumption patterns and policies that encourage the transfer of environmentally sound technologies to developing countries.

There is a need to assess long-term trends in their supply and demand for wood and to consider actions to promote the sustainability of their wood supply and their means for meeting demand, with emphasis on investment in sustainable forest management and the strengthening of institutions for forest resource and forest plantations management.

The seriousness of problems faced by both developing and developed countries with low forest cover in satisfying their needs for forest goods and services has been recognized. It also recognized that, owing to economic factors and circumstances, the impact of the problem in developing countries is much more severe than in developed countries. The needs of low-income and middle-income countries with low forest cover are likely to differ from those of high-income countries and, consequently, different sets of actions to address those needs will apply.

The importance of long-term changes in production patterns in different parts of the world and their positive and negative effects on the sustainable management of forests is acknowledged. The long-term outlook is for steadily rising demand for forest products and other forest goods and services and a declining area of forest for their production. The implications of that outlook should be reviewed in the context of the work being done by the Commission on Sustainable Development and other relevant initiatives concerned with the long-term supply of and demand for forest products and other forest goods and services.

The following policies should be adopted by developing countries with respect to commodities consistent with market efficiency: to expand processing, distribution and improve marketing practices and the competitiveness of the commodity sector; to diversify to reduce dependence on commodity exports; and to reflect efficient and sustainable use of factors of production in the formation of commodity prices, including the reflection of environmental, social and resources costs.

## **D-6 consumption**

It is recognized that production and consumption patterns have a major influence on the access to and use of forest products good and services in all countries. Furthermore, the importance of long-term changes in consumption patterns in different parts of the world and their positive and negative effects on the sustainable management of forests is acknowledged. The long-term outlook is for steadily rising demand for forest products and other forest goods and services, and a declining area of forest for their production.

In principle, countries should be guided by the following basic objectives in their efforts to address consumption and lifestyles in the context of environment and development: that all countries should strive to promote sustainable consumption patterns; that developed countries should take the lead in achieving sustainable consumption patterns; that developing countries should seek to achieve sustainable consumption patterns in their development process, guaranteeing the provision of basic needs for the poor, while avoiding those unsustainable patterns, particularly in industrialized countries, generally recognized as unduly hazardous to the environment, inefficient and wasteful, in their development processes. This requires enhanced technological and other assistance from industrialized countries.

All countries are encouraged to promote patterns of consumption and production that reduce environmental stress and meet the basic needs of humanity and develop a better understanding of the role of consumption and how to bring about more sustainable consumption patterns.

Governments also play a role in consumption, particularly in countries where the public sector plays a large role in the economy, and can have a considerable influence on both corporate decisions and public perceptions. They should, therefore, review the purchasing policies of their agencies and departments so that they may improve, where possible, the environmental content of government procurement policies, without prejudice to international trade principles.

Governments and private-sector organizations should promote more positive attitudes towards sustainable consumption through education, public awareness programmes and other means, such as positive advertising of products and services that utilize environmentally sound technologies or encourage sustainable production and consumption patterns.

There is a need to promote efficient use of materials and resources, taking into account the life cycles of products, to realize the economic and environmental benefits of using resources more efficiently and producing fewer wastes.

There is a need to expand programmes to develop consumer awareness and increase the participation of women, emphasizing their crucial role in achieving changes to reduce or eliminate unsustainable patterns of consumption and production, particularly in industrialized countries, in order to encourage investment in environmentally sound productive activities and induce environmentally and socially friendly industrial development.

### **D-7 economic instruments / tax policies / land tenure**

Forest conservation and sustainable development policies should be integrated with economic, trade and other relevant policies. Fiscal, trade, industrial, transportation and other policies and practices that may lead to forest degradation should be avoided. Adequate policies, aimed at management, conservation and sustainable development of forests, including, where appropriate, incentives, should be encouraged.

There is a need for the international community to find durable solutions to the debt problem of developing countries to provide them with the needed means for management, conservation and sustainable development of all types of forests. Other forms of innovative financing should also be explored, such as debt-for-nature swaps related to forests, and other environmentally oriented debt reduction programmes. Market-based instruments, such as taxes, levies, user fees and domestic public investments, could generate additional financial resources to support activities for sustainable forest management and conservation. A range of options relevant to specific national conditions warrants further examination. Adequately valuing forest resources and creating markets that reward sustainable forest management would contribute to the management, conservation and sustainable development of all types of forests and would generate needed public resources.

In connection with multilateral debt, it is urged that serious attention be given to continuing to work towards growth-oriented solutions to the problem of developing countries with serious debt-servicing problems, including those whose debt is mainly to official creditors or to multilateral financial institutions.

Countries in a position to do so are encouraged to continue to develop and employ appropriate market-based and other economic instruments and incentives to increase rent capture and mobilize domestic financial resources in support of sustainable forest management, as well as to reduce social costs and negative environmental impacts due to unsustainable forest and land management practices.

Governments should identify and implement an appropriate mix of economic instruments and normative measures such as laws, legislation and standards, in consultation with business and industry, including transnational corporations, that will promote the use of cleaner production, with special consideration for small and medium-sized enterprises. Voluntary private initiatives should also be encouraged.

A special effort should be made to develop applications of the use of economic instruments and market mechanisms geared to the particular needs of developing countries and countries with economies in transition, with the assistance of regional and international economic and environmental organizations and, as appropriate, non-governmental research institutes, by providing technical support on issues relating to the application of economic instruments and market mechanisms.

Given the recognition that the use of economic instruments and market mechanisms is recent, exchange of information about different country experiences with such approaches should be encouraged. In this regard, governments should encourage the use of existing means of information exchange to look at effective uses of economic instruments.

Governments should encourage research and analysis on effective uses of economic instruments and incentives with the assistance and support of regional and international economic and environmental organizations, as well as non-governmental research institutes, with a focus on such key issues as: the role of environmental taxation suited to national conditions; the implications of economic instruments and incentives for competitiveness and international trade, and potential needs for appropriate future international cooperation and coordination; and the possible social and distributive implications of using various instruments.

Secure land tenure is an underlying precondition for sustainable forest management and the management of other land uses. Insecure land tenure has had a profound impact on driving deforestation and forest degradation. There is a need to formulate policies aimed at securing land tenure for local communities and indigenous people, including policies, as appropriate, aimed at the fair and equitable sharing of the benefits of forests. Countries should establish and develop local, national and intersectoral mechanisms to handle environmental and developmental consequences of land tenure expressed in terms of land use and land ownership. Particular attention should be given to protecting the property rights of women and pastoral and nomadic groups living in rural areas. Policies that address long-term land tenure rights and encourage local community investment in sustainable forest management could mobilize significant financing.

#### **D-8 cost internalization**

There is a need to incorporate all management and environmental costs and benefits into market forces and mechanisms to achieve forest conservation and sustainable development domestically and internationally. Without the stimulus of prices and market signals that make clear to producers and consumers the true costs of the consumption of forest resources and the corresponding generation of wastes, significant changes in consumption and production patterns seem unlikely to occur in the near future.

Countries and international organizations concerned with forestry and trade are encouraged to explore ways and means to establish full cost internalization of both wood products and non-wood substitutes and to undertake market and economic analyses of their implications for forest management and development costs and sustainable forest management. Such analyses should also examine the potential cost and benefits of improved efficiency and sustainability at all levels of the forest industry.

Full-cost internalization may contribute to sustainable forest management in the long term. Without it, socio-economic and environmental costs may not be fully reflected in and addressed by the market, with the result that unsustainable practices may appear more attractive and less costly than sustainable forest management. Only limited consensus exists on concepts, definitions, measurements, techniques and data requirements to introduce environmental costs into pricing mechanisms. The relationship to substitutes, among other things, will affect the allocation of costs and benefits of cost internalization and market-based instruments. Exchange of information on various research findings and experiences in relation to costs and policy mechanisms are encouraged so as to facilitate discussion and policy development.



Recognizing that countries will develop their own priorities in accordance with their needs and national plans, policies and programmes, the challenge is to achieve significant progress in the years ahead in meeting three fundamental objectives: to incorporate environmental costs in the decisions of producers and consumers, to reverse the tendency to treat the environment as a "free good" and to pass these costs on to other parts of society, other countries, or to future generations; to move more fully towards integration of social and environmental costs into economic activities, so that prices will appropriately reflect the relative scarcity and total value of resources and contribute towards the prevention of environmental degradation; and to include, wherever appropriate, the use of market principles in the framing of economic instruments and policies to pursue sustainable development.

Investment in forests may be encouraged by voluntary codes of conduct for sustainable forest management, stronger national regulations and enforcement, full cost internalization in the pricing of renewable resources and various incentives. Policies and regulations should be carefully evaluated before implementation to avoid negative social and environmental impacts and market distortions, which would create disincentives.

#### **D-9 maintain future development potential**

Forest resources and forest lands should be sustainably managed to meet the social, economic, ecological, cultural and spiritual needs of present and future generations. This includes meeting future needs for forest products and services, such as wood and wood products, water, food, fodder, medicine, fuel, shelter, employment, recreation, habitats for wildlife, landscape diversity, carbon sinks and reservoirs, and for other forest products.

### **E. Social Issues**

#### **E-1 employment**

The important role of natural and planted forests and the forest industry at large in providing employment and development should be recognized and enhanced.

There is a need to promote appropriate small-scale forest-based enterprises for supporting rural development and local entrepreneurship. There is also a need to promote and support wildlife management, eco-tourism and the cultivation of wild species for improved rural income and employment, ensuring economic and social benefits without harmful ecological impacts.

Governments, business and industry should promote the active participation of workers and their trade unions in decisions on the design, implementation and evaluation of national and international policies and programmes on environment and development, including employment policies, industrial strategies, labour adjustment programmes and technology transfers. Trade unions, employers and governments should cooperate to ensure that the concept of sustainable development is equitably implemented.

Countries should develop and implement strategies for creating alternative employment opportunities and provide required training to young men and women.

### **E-2 forest community stability**

Some communities with sustainable lifestyles based on traditional forest-related knowledge have been undermined by the accelerated loss of forests resulting from deforestation and forest degradation, the introduction of new technological changes and economic pressures which occur in the absence of adequate measures for conservation and sustainable management.

Governments and the international community should address the problems that hinder efforts to attain the conservation and sustainable use of forest resources and that stem from the lack of alternative options available to local communities, in particular the urban poor and poor rural populations who are economically and socially dependent on forests and forest resources.

There is a need to formulate policies aimed at securing fair and equitable sharing of the benefits of forests for local communities and indigenous people.

Subject to national legislation, take action to respect, record, protect and promote the wider application of the knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles for the conservation of biological diversity and the sustainable use of biological resources, with a view to the fair and equitable sharing of the benefits arising, and promote mechanisms to involve those communities, including women, in the conservation and management of ecosystems.

There is a need for developed countries and relevant international organizations to support, where appropriate, community-based processing and marketing of wood and non-timber forest products and to support initiatives related buffer and transition zone management near protected areas.

There is a need to create the capacity of village communities to take charge of their development and the management of their forest resources on a socially equitable and ecologically sound basis and to create or strengthen rural organizations in charge of village and forest management.

There is a need to improve production systems in order to achieve greater productivity within approved programmes for conservation of national resources and in the framework of an integrated approach to rural development and to provide opportunities for alternative livelihoods as a basis for reducing pressure on forest resources while at the same time providing additional sources of income, particularly for rural populations, thereby improving their standard of living.

Countries should promote national policies that provide incentives to local people for the use and transfer of environment-friendly technologies and conservation practices, to promote environmentally sound income-generating activities and to improve infrastructure and social

services, in particular to protect the livelihoods of local communities and indigenous people.

### **E-3 participation**

A number of specific elements need to be considered during the development and implementation of national forest programmes, in particular the need for appropriate participatory mechanisms to involve all interested parties; decentralization and empowerment of regional and local government structures; recognition and respect for customary and traditional rights of indigenous people, local communities, forest dwellers and forest owners; and the establishment of effective coordination mechanisms and conflict-resolution schemes. It is fundamental that there be a broad participation of indigenous people, forest dwellers, forest owners and local communities in meaningful decision-making regarding the management of state forest lands in their proximity, within the context of national laws and legislation.

It is agreed that indigenous people and other forest-dependent people embodying traditional lifestyles should play a key role in developing participatory approaches to forest and land management. Such approaches should involve all relevant parties from both public and private sectors and should focus on community forest management; land-use systems; research, training and extension; the formulation of criteria and indicators; and conflict resolution.

There is a need for countries, with the assistance of international organizations, to support national, regional and international efforts that will enhance the capacity of indigenous people, forest-dependent people who possess traditional forest-related knowledge and appropriate forest owners to participate in agreements that apply traditional forest-related knowledge for sustainable forest management and to promote partnerships among all interested parties.

Countries and international organizations are urged to strengthen and further develop partnerships and collaboration between local communities, governments, non-governmental organizations and other major groups to promote the sustainable management and regeneration of natural vegetation in ecosystems affected by desertification and drought.

Governments, within their respective legal frameworks, and international organizations, in consultation with countries, should consider supporting indigenous people, local communities, other inhabitants of forests, small-scale forest owners and forest-dependent communities by funding sustainable forest management projects, capacity-building and information dissemination, and by supporting direct participation of all interested parties in forest policy discussions and planning.

There is a need to promote the participation of the private sector, labour unions, rural cooperatives, local communities, indigenous people, youth, women, user groups and non-governmental organizations in forest-related activities and to promote access to information and training programmes within the national context.

### **E-4 gender**

There is a need for greater recognition of the importance of forest resources to the livelihood of rural women in developing countries and the promotion of the full participation of women in all aspects of the management, conservation and sustainable development of forests. There is the need to recognize and foster the traditional methods and the knowledge of women relevant to the conservation of forest resources and ensure the opportunity for their participation in the economic and commercial benefits derived from the use of such traditional methods and knowledge.

Women's role in the forest sector should be enhanced by: revising forest-related curricula and other educational material, with a view to promoting the dissemination to both men and women of gender relevant knowledge and valuation of women's roles through formal and non-formal education; by formulating and implementing clear governmental policies and national guidelines, strategies and plans for the achievement of equality in all aspects of society, including the promotion of women's role in forest management; by reviewing policies and establishing plans to increase the proportion of women involved as decision makers, planners, managers, scientists and technical advisers in the design, development and implementation of policies and programmes for sustainable forest management; by strengthening and empowering women's organizations for sustainable development; by promoting the reduction of the heavy workload of women and girls at home and outside with particular reference to forest-related activities like fuelwood collection; by supporting and strengthening equal employment opportunities and equitable remuneration for women; and by developing consumer awareness and the participation of women in achieving changes to reduce or eliminate unsustainable patterns of consumption and production.

#### **E-5 indigenous people's rights**

National forest policies should recognize and duly support the identity, culture and the rights of indigenous people, their communities and other communities and forest dwellers. Appropriate conditions should be promoted for these groups to enable them to have an economic stake in forest use, perform economic activities and achieve and maintain cultural identity and social organization, as well as adequate levels of livelihood and well-being, through those land tenure arrangements which serve as incentives for the sustainable management of forests.

There is a need to establish, expand and manage, as appropriate to each national context, protected area systems, which includes systems of conservation units for their environmental, social and spiritual functions and values, including the traditional forest habitats of indigenous people, forest dwellers and local communities.

In full partnership with indigenous people and their communities, governments and intergovernmental organizations should establish a process to empower indigenous people and their communities through measures that include: recognition that their lands should be protected from activities that are environmentally unsound or that the indigenous people concerned consider to be socially and culturally inappropriate; recognition of their values, traditional knowledge and resource management practices with a view to promoting environmentally sound and sustainable development; recognition that traditional and direct dependence on renewable resources and ecosystems, including sustainable harvesting,



continues to be essential to their cultural, economic and physical well-being; and the development and strengthening of national dispute-resolution arrangements in relation to settlement of land and resource-management concerns.

There is a need to establish, where appropriate, arrangements to strengthen the participation of indigenous people and their communities in the national formulation of policies, laws and programmes relating to resource management and other development processes that may affect them, and their initiation of proposals for such policies and programmes. Indigenous people and their communities should be involved at the national and local levels in resource management, conservation strategies and other relevant programmes to support and review sustainable development strategies.

Certain conditions at the national level will need to be met if indigenous people and other forest-dependent people embodying traditional lifestyles, forest owners and local communities are to participate fully in agreements and offer their traditional forest-related knowledge for the benefit of other interested parties. Holders of traditional forest-related knowledge need to be represented by their own representatives; to feel secure in their land tenure arrangements; to be reassured that they have been accorded status equal to that of the other members of the agreements; and to be convinced of a common purpose compatible with their cultural and ecological values.

#### **E-6 protection of intellectual property rights**

Access to biological resources, including genetic material, shall be with due regard to the sovereign rights of the countries where the forests are located and to the sharing on mutually agreed terms of technology and profits from biotechnology products that are derived from these resources.

Ways and means to secure the effective protection of indigenous rights and the fair and equitable sharing of benefits arising from the use of traditional forest-related knowledge which many countries consider should incorporate appropriate payment to indigenous people and relevant local communities based on their intellectual property rights, should be identified in the context of international and national legal systems which may include recognition of customary law and indigenous legal systems. International cooperation on traditional forest-related knowledge and rights related to it must be consistent with obligations under the Convention on Biological Diversity and other relevant instruments.

Countries should explore further different options for the policy, institutional and legal frameworks required to support the application of intellectual property rights and/or other protection regimes for traditional forest-related knowledge, the fair and equitable sharing of its benefits and the possible development of formal agreements by which traditional forest-related knowledge can be accessed.

The World Intellectual Property Organization (WIPO), together with the United Nations Conference on Trade and Development (UNCTAD), taking into account decision III/14 of the Conference of the Parties to the Convention on Biological Diversity, should undertake a study aimed at advancing international understanding of the relationship between intellectual property and traditional forest-related knowledge and develop ways and means to promote effective protection of traditional forest-related knowledge, in particular against illegal international trafficking, and also to promote the fair and equitable sharing of benefits arising from such knowledge.

Countries should undertake additional pilot studies on the relationship between intellectual property rights systems and traditional forest-related knowledge, at the national level, in accordance with a decision made at the third meeting of the Conference of the Parties to the Convention.

The Secretary-General, in collaboration with the Convention, should produce a compilation of international instruments and national legislation, including draft legislation, pertaining to the protection and use of traditional forest-related knowledge and the fair and equitable sharing of benefits arising from such knowledge, and encourage countries to exchange information on national experiences in that field.

Countries should consider developing mechanisms, subject to national legislation, to ensure the fair and equitable sharing of benefits with local and indigenous communities, including payments, where appropriate, arising from the use of traditional technologies developed by them for sustainable forest management.

#### **E-7 infrastructure development**

There is a need to improve infrastructure and social services, in particular to protect the livelihoods of local communities and indigenous people.

#### **E-8 access to capital**

There is a need for programmes to support and strengthen equal employment opportunities and equitable remuneration for women in the formal and informal sectors with adequate economic, political and social support systems and services, including equal access to forest resources.

There is a need for programmes to establish rural banking systems with a view to facilitating and increasing rural women's access to credit.

#### **E-9 rural policy**

States have the sovereign and inalienable right to utilize, manage and develop their forests in accordance with their development needs and level of socio-economic development and on the basis of national policies consistent with sustainable development and legislation, including the conversion of such areas for other uses within the overall socio-economic development plan and based on rational land-use policies.

## ANNEX 1

**INTERNATIONAL FOREST POLICY LINKAGES** - notations refer to the chapters, paragraphs, articles, and/or categories of programme elements in the four reference documents.

no.	Issues	Forest Principles	Agenda 21	IPF Final Report	IFF Programme of Work
<b>A.</b>	<b>Institutions and policy instruments</b>				
A-1	Coordination of international action on forests	1.(a), 1.(b), 3.(b), 7.(b), 8.(d), 10., 12.(b), 14.,	2.9(d), 2.10, 2.16, 2.21, 2.22, 2.27, 2.39, 2.40, 8.16(b), 8.17, 8.22, 8.34, 8.43, 8.44, 8.46, 8.50, 9.7, 9.8, 9.18(a), 11.3, 11.12(b), 11.12(e), 12.6 (b), 12.6(c), 12.36(d), 13.5 (b), 13.5(e), 13.6 (c), 15.4(a), 15.4 (f), 15.4(i), 19.39 (d), 20.21(a), 24.2(d), 26.4(a), 26.6(b), 27.5, 27.6, 27.8, 27.9 (f), 28.2(b), 28.4, 29.3, 29.11(c), 30.15, 30.16, 30.27, 30.28, 30.29, 31.4(b), 31.4(c), 31.9, 31.10(a), 31.10 (d), 32.7, 34.17, 34.18, 34.18, 34.19, 34.21, 34.22, 34.23, 34.24, 34.26, 34.27, 35.6(a), 35.6(b), 35.7(b), 35.7(g), 35.12 (b), 35.12(c),	15, 16, 34, 36, 40(a), 40 (b), 45, 46(a), 46(e), 50(b), 50(c), 50(e), 51, 57, 58(b-v), 58(c), 58 (d), 58(e), 60, 64, 65, 67(a), 67(b), 67(d), 67(e), 67(f), 68(b), 71(a), 77(c), 78(a), 86, 89(d), 89 (e), 89(f), 92, 94(b), 94(c), 96, 102, 111, 115(c), 115 (e), 115(f), 122, 123, 133 (b), 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147(a), 147(b-i), 147 (b-ii), 147(c), 148, 149,	I.(a), I.(b), II. (a)i, II.(a)ii, II. (e), III.

			35.12(d), 36.5(j), 36.10(b), 36.10 (e), 36.10(j), 36.10(k), 37.3, 37.5, 37.6, 37.8, 37.9, 37.11, 38.7, 38.8, 39.2, 39.3, 39.5,		
A-2	Reform of institutions responsible for forest policy	13(e)	2.9(d), 2.22, 2.34, 2.37, 2.38 (a), 8.4(a), 8.4 (b), 8.4(c), 8.5 (c), 8.5(g), 8.16 (b), 8.17, 8.18, 8.19, 8.20, 8.21, 8.32, 8.33, 8.42, 9.11, 9.20(b), 9.21(a), 9.21(b), 10.5, 11.2(a), 11.3, 12.18(a), 12.28(a), 12.36 (b), 12.37(a), 13.15(c), 15.5(i), 24.2(c), 26.5(a), 26.6(a), 27.9(b), 27.10(d), 30.22, 30.23, 30.26, 31.4(d), 31.10 (d), 34.18(a), 35.6(a), 35.6(b), 35.6(c), 35.7(c), 35.7(d-iii), 38.8 (c), 38.8(d), 39.3,	9, 63, 69(d), 129(e), 132 (b), 136, 138, 139, 146(b), 146(c), 146 (d),	
A-3	Coordination of cross-sectoral policies and programmes	2(a), 3(c), 6.(e), 7(a), 8.(e), 8.(h), 9.(c), 13. (d), 13.(e),	2.9(d), 2.16, 4.17(b), 8.3(a), 8.3(d), 8.4(a), 8.4(b), 8.4(c), 8.5(c), 8.5(e), 8.5(f), 8.16, 8.42, 10.5, 10.6, 10.7, 11.3(a), 11.3(c), 11.12 (b), 11.31(e), 12.37(d), 13.5 (b), 13.5(c), 13.6 (a), 13.6(f), 15.4 (c), 15.5(b), 15.5 (k), 19.13, 19.14, 19.38(b), 20.21 (a), 24.2(f), 31.9, 31.10(a), 31.10 (b), 32.6(a), 32.7 (b), 35.7(a), 35.7 (c), 35.7(d-iii),	8, 10, 15, 17 (a), 21, 22, 29 (b), 33, 34, 42, 44, 46(a), 48, 58(b-ii), 58(b-vii), 59, 67(c), 70(d), 81, 84, 103, 136, 141, 142, 143,	



			35.7(f), 35.11(c), 36.15, 37.5, 37.6, 37.11, 38.8 (c), 38.8(d), 39.3 (g),		
A-4	financial mechanisms in support of SFM	7.(b), 9.(a), 9.(b), 10., 11.,	2.26, 2.27, 2.30, 8.3(a), 10.7, 11.22(a), 13.6 (d), 15.5(d), 27.9 (c), 30.19, 30.20, 33.11, 34.14(b), 34.18(e-v), 34.24,	11, 13, 17(c), 37, 40(m), 43, 57, 58(c), 59, 60, 61, 62, 63, 64, 65, 67 (a), 67(d), 67 (e), 67(f), 67 (g), 68(a), 68 (b), 68(c), 70 (a), 70(c), 71 (c), 77(a), 77 (c), 78(a), 90, 94(a-iv), 94 (c),	II.(a)i, II.(a)ii, II.(c),
A-5	forest investment	6.(e), 7.(b), 10.,	2.27, 11.22(a), 12.18(g), 30.20, 33.11, 34.28,	13, 17(c), 28 (a), 59, 60, 61, 62, 63, 64, 67(e), 67 (f), 68, 69, 76, 77(c), 78(a),	II.(a)ii;
A-6	coordination of programmes of donors and recipients	1.(b), 6.(e), 7.(a), 7.(b), 8(c), 9.(a), 9.(b), 12. (a),	2.26, 2.27, 2.28, 2.35, 2.36, 2.37, 2.40, 8.16(b), 8.34, 8.49, 8.50, 32.6(a), 34.22, 34.24, 36.23, 37.3(b), 37.11,	15, 17(b), 17 (c), 17(i), 30 (b), 31(b), 40 (f), 40(g), 40 (j), 40(k), 40 (m), 43, 45, 46(e), 46(f), 57, 58(d), 61, 64, 65, 66, 67 (b), 67(c), 70 (a), 70(d), 71 (b), 77(e), 78 (a), 89(b), 94 (a-iv), 115(c),	
A-7	technology transfer	11.,	2.27, 4.8, 4.17 (c), 4.18, 4.19, 8.33, 9.18(c), 9.18(f), 9.21(c), 12.18(a), 12.26 (b), 15.4(h), 24.3 (c), 26.3(a-vi), 26.5(c-ii), 30.11, 31.4(h), 34.14, 34.15, 34.16, 34.17, 34.18, 34.19, 34.20, 34.21, 34.22, 34.23, 34.26, 34.27,	17(g), 43, 48, 57, 58(c), 59, 64, 66, 69(a), 71(b), 72, 73, 74, 75, 76, 77 (a), 77(b), 77 (c), 77(e), 77 (g), 78(a), 132 (c), 138,	II.(c),

			34.28, 35.11(b), 35.12(a), 35.12 (e), 35.12(l), 37.7,		
A-8	capacity building	3.(a), 11., 12.(a), 12. (b), 12.(d),	2.38(a), 4.8, 4.19, 8.3(b), 8.5 (b), 8.20, 8.21, 8.43, 8.45, 8.49, 9.8, 10.5, 11.2 (a), 11.2(b), 11.3, 11.30(a), 12.7(c), 12.26 (b), 12.36(a), 12.37(a), 13.6 (a), 13.15(c), 19.14, 19.39(a), 19.39(b), 19.39 (c), 20.21(d), 20.21(e), 26.3(a- vii), 26.5(b), 26.5 (c), 28.4, 30.13, 31.4(d), 31.4(e), 31.10(a), 31.10 (b), 34.14(d-ii), 34.16, 34.20, 34.26(a), 35.7 (a), 35.12(e), 35.21, 35.22(a), 35.22(b), 35.22 (c), 36.13(c), 36.13(d), 36.22, 37.3, 37.4(a), 37.5, 37.6, 37.7, 37.8, 37.9, 38.8 (b), 38.8(c), ang4105 38.8 (d), 38.8(e), 39.3 (f), 39.3(h),	14, 17(g), 21, 28(a), 40(g), 40(j), 40(k), 58(b-vi), 58 (e), 60, 70(e), 74, 77(e), 77 (f), 84, 89(b), 92, 94(a-iii), 100, 133(b), 138,	
A-9	education and training	2.(c), 11., 12.(b),	4.26, 8.20, 8.38, 8.43, 10.9, 11.3 (b), 11.3(e), 11.3 (f), 12.56(a), 12.56(c), 15.5 (a), 15.5(m), 20.21(b), 20.21 (e), 24.2(e), 24.3 (c), 25.5, 25.9 (d), 25.9(f), 29.3 (e), 30.14, 30.15, 30.21, 31.4(e), 31.10 (c), 34.14(d-i), 34.22, 34.26(b), 35.21(a), 35.21 (f), 35.22(a),	17(g), 33, 40 (l), 43, 46(d), 69(a), 102, 138,	Category II. (c),

			36.4, 36.5, 36.10 (a), 36.10(b), 36.10(d), 36.10 (j), 36.10(k), 36.13, 36.14, 36.15, 36.16, 36.17, 36.18, 36.19, 36.20, 36.21, 36.22, 36.23, 35.25, 36.26, 37.3(a), 37.8, 37.9,		
A-10	sharing information	2.(c), 12. (b), 12.(c), 12.(d),	2.15, 4.17(c), 4.18, 4.20, 4.22, 4.26, 8.4(f), 8.5 (a), 8.16(a), 8.17, 8.34, 8.35, 8.38, 8.48, 8.49, 10.9, 11.3(b), 11.3(e), 11.30 (a), 11.30(b), 11.31(e), 12.6 (a), 12.6(b), 12.6 (c), 12.7(a), 12.7 (b), 12.56(a), 12.56(c), 13.5 (d), 13.5(f), 13.6 (c), 15.5(k), 15.5 (m), 19.13, 19.14, 19.38(a), 19.39(a), 19.39 (b), 20.21(b), 20.21(d), 20.21 (h), 20.21(i), 23.2, 24.2(e), 25.4, 25.9(f), 27.9(g), 27.10(f), 28.2(a), 28.2(b), 28.2(c), 28.3, 28.4(a), 28.5, 30.10, 30.11, 30.13, 30.14, 30.15, 30.16, 31.3, 31.4(a), in 31.4(e), 31.9, 34.15, 34.16, 34.17, 34.23, 34.26, 35.6(a), 35.6(b), 35.6(c), 35.6(d), 35.7(a), 35.12(b), 35.16, 35.17(b), 35.21 (d), 35.22(c), 35.22(d), 35.22 (e), 35.22(g),	16, 30(a), 31 (a-iii), 37, 38, 40(a), 40(b), 40(f), 40(k), 40(m), 40(q), 48, 49, 50(b), 50(c), 57, 58 (b-vii), 58(c), 71(b), 72, 73, 76, 77(a), 77 (f), 77(g), 78 (a), 78(b), 78 (c), 81, 82, 89 (e), 89(g), 89 (h), 94(a-ii), 94(a-iii), 100, 102, 103, 104 (a), 111, 113, 115(d), 122, 126, 131(a), 133(g), 134 (b), 135(a),	

			36.4(c), 36.4(d), 36.5(h), 36.10, 36.20, 36.22, 36.24, 37.10, 38.8(g),		
A-11	coordination of research	6.(c), 12.(a), 12.(b), 12.(c),	4.18, 8.36, 8.43, 9.8, 9.12(d), 9.21(c), 11.3(g), 11.13(g), 11.22(f), 11.30(a), 11.31(d), 15.5(f), 20.21(c), 30.25, 30.29, 31.4(e), 31.4(f), 31.9, 32.7(a), 34.14(d-ii), 34.21, 34.22, 34.23, 35.6(d), 35.6(e), 35.7(b), 35.7(f), 35.7(g), 35.7(h), 35.11(a), 35.12(a), 35.12(b), 35.12(c), 35.12(e), 35.12(j), 35.12(k), 35.12(l), 35.16, 35.17, 36.5(j),	25, 27(a), 27(b), 29(b), 30(a), 30(b), 31(a-i), 31(a-ii), 31(c), 33, 40(j), 40(k), 43, 46(d), 46(g), 49, 57, 58(b-vii), 75, 78(a), 89(c), 90, 91, 92, 93, 94(a-i), 94(a-ii), 94(a-iii), 94(a-iv), 94(b), 94(c), 94(d), 104(c), 134(b), 138,	II.(c), II.(d),
A-12	definition of SFM			33, 53, 58(a), 109, 115(d),	
A-13	development of criteria for SFM	8.(d),	8.44, 10.8, 11.22(b), 35.7(d-i), 39.3(d),	17(d), 25, 26, 33, 40(l), 58(b-vii), 83, 85, 89(a), 89(d), 93, 100, 104(c), 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 122, 133(e),	
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